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ABSTRACT

This report examines the problem of curriculum revision in the formal education structure of developing countries to eliminate sex bias against women. It identifies three needs: to (1) increase the number of girls in school, (2) alter school schedules to allow women with household and agricultural responsibilities to attend classes, and (3) revise curriculum to more accurately reflect the changing status of women in today's world. Opening sections of the report elaborate on problems of sex bias in printed curriculum materials, resistance to new methods and content on the part of traditionally conservative teachers, and distractions in open-air facilities. The remainder of the report presents 10 guidelines for curriculum revision. These include identification of a target population, determination of relevancy of curriculum, incorporation of the needs of the population being served, assessment of indigenous culture for female role models, acquisition of baseline data to document economic and social ramifications of sex bias in education, effort to revise instead of replace existing curriculum, and statement of goals in objectively quantifiable terms. (AV)

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The Differential Impact of Educational Innovations on Girls and Women: Media-Based Instruction and Curriculum Revision

Phase II
Curriculum Revision as if Women Mattered

By

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Acknowledgement of the criticality of education in development plans has led to a re-assessment of the formal education process in the developing world. One outcome of this new interest is that women, long a neglected factor in development equations, are now the focus of myriad compensatory projects. However, the overwhelming majority of the female-targeted projects are non-formal. Programs in health, nutrition, family planning and even agriculture, dot the development landscap Rarely, however, does one encounter a formal education projec ecifically aimed at increasing the number of girls in school, altering the structure to accommodate young women with household and agricultural responsibilities, or revising the curriculum to more accurately reflect the changing status of women in today's world.

This report takes a critical look at girls in formal schools and the curriculum revision process. It investigates the specific question of how development planners can impact the curriculum revision process to eliminate sex-bias in new materials, revise present materials and sensitize teachers to the magnitude of the problem and the urgency of a solution.

Definition of Terms

Curriculum is the building blocks of education. The curriculum is the subject matter and substantive content. Usually organized around recognized disciplines, the curriculum is divided into subject areas in which the material and content are subdivided

into series of progressively more complex learning sequences.

Curriculum is integrally related to learning theories. Some materials are appropriate for one age and other concepts for a different age. Curriculum developers combine these learning theories, age appropriateness and the concepts of a given discipline and develop learning sequences of a hierarchical nature for for classroom presentation. Usually the materials are taught in an institution devoted to the purpose of education, a school.

New efforts to reach ever-increasing numbers of school age populations in the developing world have focused on new ways of reaching students without the long-term investments in student time, budgetary costs, and teacher training that formal education entails. One answer has been non-formal programs. For our purposes, non-formal education is a structured program of learning in a non-institutional, non-school setting, usually within the participant's immediate environment, in which the content is specific to the participant's occupation and/or lifestyle.

Statement of the Problem

Curriculum revisions must occur to eliminate sex-bias in materials being used in school everyday. Any educator will confirm the basic truth that for the majority of children, the printed word is gospel. What students see in print is what they believe.

Illustrations in textbooks and other curricular materials use males in most photographs and drawings, especially if the model is using machinery or involved in action. Approximately 75 percent of figures in

American textbook illustrations are male (Report on Title IX, State of Massachusetts, p. 3). A similar percentage of male dominated illustrations appear in the textbooks of virtually every former colonial master, for they are the developers and sellers of both old and new texts. While the most blatantly biased American materials are either being revised or discarded, the lag time for American produced texts to reach developing nations and the LDC's internal debates about the relate importance of sex-bias-free materials versus more and cheaper copies of older texts, will take from two to five years.

This kind of discrimination is very subtle. It builds a case that women do not involve themselves with interaction with modern society to the extent that men do. Women are retiring; men are aggressive. Men explore; women harbor and maintain. Men are better at math and numbers, learn new languages more quickly, and read with better comprehension. These images, perpetuated and reinforced by textbook images, do, in fact, become truth. Male students in three public high schools in Monrovia were viewed by their teachers are more curious, more aggressive, more diligent pupils in homework preparation than their female classmates. Higher scores on standardized tests corroborated the teachers' impressions.[2] Textbook images help to establish and then

reinforce a self-fulfilling prophecy of female inferiority. Textbook discussions and illustrations are often unconscious manifestations of biases, but texts' biases are nevertheless insidious because of their pervasiveness and their subletries.

Curriculum innovations and textbook changes run into obstacles from several sources. Textbook committee members may have favorite texts from their school days. Bookstore owners, often having stockpiled for two years in advance, are adamant and effective lobbyists for maintaining current texts, no matter how culturally irrelevant and sexually biased the book, so that they do not lose money.

Scope of the Universe

Curriculum revision does not take place in a vacuum. Three factors impact the curriculum revision process in a major way: the teachers; the students; and the facilities.

Teachers are critical to the learning process, and much has been written about their multi-functional role in the development process as well. In addition to serving as imparters of knowledge, they are also role models, interpreters of social change and actual change agents themselves. If they live in rural areas, they are often the best educated persons in the village. The potential to influence children is enormous.

A multitude of studies from the industrialized and developing world allows us to profile teachers in LDC's. First, they are are not as well qualified as their colleagues in the developed world. While most teachers have the equivalent of a secondary school school diploma usually earned in normal school, many may not have

completed secondary school. This gross underqualification means that several innovative strategies, based on teacher mastery of subject matter are not possible given the limited capabilities of the teaching staff.

Teachers the world over are conservative. They like to teach the subjects that they were taught in the manner in which they were taught. They resent new information and techniques. This conservatism has serious consequences for students in terms of content and pedagogical strategies. For students it means that they will most likely be taught by rote, that the classroom will not be an exciting, stimulating learning laboratory, but rather a place of stuffy tradition that one must endure to get a degree and a white collar job. Introduction of communications technology and media based programs of IR and ITV may also meet with some resistance. Evaluations of various radio education programs in Latin America are filled with anecdotes of teachers who had difficult with reception during one broadcast and never turned on the set again. Or take the Indian case in which the teacher felt that the most important priority was to keep the set operational and therefore used it only when the supervisor visited her classroom.

Teacher conservatism also means that new materials will have a difficult time being introduced. New curriculum with an emphasis on sex equality may be ideologically and personally offensive and therefore meet with personal as well as professional resistance.

This conservatism also means that teachers do not readily and easily benefit from in-service courses. At the first sign of difficulty either from student questions or their own new knowledge of the material, their instinct is to return to their tried and true methods of pedagogical and content presentation.

The second factor of importance is the students. The typical LDC student is older than his or her western counterpart, probably undernourished if she is female, and saddled with household or agricultural responsibilities in addition to her school work. She may or may not have electric lights by which to do her homework. The environment is not conducive to academinc pursuits and questions are constantly raised about the wisdom of sending a daughter to school. Boys may not fare much better.

Given the limited experiences and non-academic environment, curriculum should be basic and straightforward, stressing basic skills which may, themselves, pose the students some difficulty.

Finally, any curriculum revision effort must consider the facilities. In many of the open air facilities of the tropics, the sounds of other classrooms are clearly audible. The rain on the tin roof may also disturb lessons. If the building has electricity more activities and experiments are possible than in a school building without electricity.

Guidelines for Curriculum Revision

1. Identification of target population.

This is the first critical step for any curriculum revision effort. One mistake that development planners often

make is the failure to differentiate among different groups of women with varying needs. If we are planning curriculum revision in formal schools our needs are quite different that those for curriculum interventions in a non-formal program.

If we are dealing with the formal system, the education level has to be determined. Revision of materials to include indigenous heroines, for instance, may be appropriate for primary school pupils, but too simplistic for high school students.

Within the formal system a further distinction between academic and vocational curricula has to be made. While an emphasis on vocational skills may be more appropriate, such programs are harder to impact with sex-bias elimination curriculum revisions. Ironically, the minority of girls in vocational courses need the support of a bias free curriculum even more than their sisters in the academic streams.

Another basic identification is determination of either a rural or urban target population. As in the vocational example, rural girls have a greater need for bias-free curriculum, given the dearth of female role models and the lack of supports to female education. In virtually every LDC, female rural illiteracy rates are dramatically higher than those of urban females. Moreover, the debate among educators, developers and governments still continues regarding the value of rural literacy, compounding the access and wastage problems of rural females.

2. Relevancy of the Curriculum.

A first concern that inevitably arises in a discussion of curriculum revision is relevance. Relevance has two dimensions that we need to consider. First, can the child understand what is being taught. Does the curricular example have any relationship to her experiential ken on which she can build. Second, does the subject and/or concept have any utility in her life, either in the home or the workplace.

These two aspects of relevance, comprehension and utility, are the major guideposts to any curriculum intervention. Consideration of relevance is especially important in the introduction of sensitive materials on a topic as possibly threatening as sex-bias elimination.

3. Incorporation of the views and perceived needs of the population being served.

A common mistake of curriculum developers is their failure to attain an in-depth understanding of the culture and needs of client population for whom they are developing the curriculum. A fault that plagues curriculum revision efforts worldwide, the impact in LDC's of this failure is exaccerbated.

Focus of such an assessment should include the state of a given economy and the employment prospects for women, cultural constraints impeding full integration of girls and women into all aspects of national life, and an assessment

of other sources of information and influence in addition to the curricular project under consideration.

4. Assessment of the indigenous culture for female role models.

A fairly conventional method of introducing new curriculum to reduce sex-role stereotyping is the addition of new curricular modules that deal exclusively with women. While this method can achieve positive outcomes, one has to be careful that indigenous heroines and role models exist before initiating the curriculum development process. Moreover, some heroines may be politically anathema to the current regime, and the political ramifications, too, must be carefully considered.

5. Application of appropriate learning theories relevant to the target audience.

Having determined that the goal is subtle changes with the curricuum to eliminate sex bias, curriculum developers should identify possible curricular impact points by grade or level. These impact points should be determined after careful application of learning theories of Piaget, Jerome Bruner or other psychologists and professionals who have studied how young people learn.

The argument is often made that the Western learning theorists are irrelevant to the developing world. However, several studies using the techniques and theories of Piaget and others have been executed in the developing world with

outcomes similar to those of Western researchers. In Romanus Ohuche's and J. Williams's application of Piagetian techniques with pre-schoolers and lower primary pupils in Liberia, the age-set responses were quite similar. On the other hand, Gay and Cole found that Kpelle children assimilated new knowledge of mathematics differently. Gay and Cole concluded that innovative local technigues were culturally based and culturally relevant were necessary to teach basic skills.

6. The importance of baseline data.

A curriculum revision that aims to eliminate sex role stereotyping is an intervention that is particularly difficult to initiate. Although one may strike a responsive chord among many educators, the argument will be made that sex discrimination elimination is a qualitative improvement, and that developing nations must prioritize for basic skills, vocational skills and increased access, not qualitative improvements to help some sub-strata of the population improve its self-esteem.

A well documented base line study with examples of the economic costs of discrimination against women in terms of high wastage rates, lost labor force participation, loss of tax revenues and lowered GNP may move more development planners than the moral and social arguments of frustrated ambitions and wasted lives.

A high percentage of start-up time and money should be invested in a high quality, sex integrated project design team charged with the specific task of documenting the economic and social ramifications of sex-bias in education with specific instances in the particular nation.

The data collection division of the project design team should also include female researchers of the host country. The presence of indigenous professional women who feel that sex-bias free curriculum is significant and are willing to work to that end, offers further testimony to the importance of the effort.

7. Primary focus on adaptations and revisions of existing curriculum.

One way of initiating curricular change is by working with the existing curriculum. This method has several advantages. First, the costs are much cheaper if one is merely revising, rather than attempting to develop a completely new curricular module. Second, the institutional resistance to revision is much less than resistance to totally new developing. If curriculum developers are revising existing materials, then they are acknowledging the worth of the curriculum that exists, while updating and improving it. If curriculum developers are introducing totally new materials, then many educators feel that their work, efforts and choices are being rejected. Third, the conservatism of teachers may foil new efforts. Earlier, the reluctance of teachers to deal with new materials was cited. If teachers feel that this is a new interpretation of subject matter they already know and feel comfortable teaching, then instructors are much more likely to accept and try to incorporate new pedagogical strategies and information.

Therefore, for costs and maximum utilization, initial efforts for sex-bias elimination should begin with curriculum currently in

use.

8. Statement of specific goals and objectives in objectively quantifiable terms.

It is essential that planned curriculum revisions to eliminate sex-role stereotyping be well planned and specific. In an initial review of existing materials, the developers should identify the precise chapters for intervention and revision in a given syllabus. Such specificity will guard against ideological and rhetorical aims and make sure that the goals and objectives of the revision are always in sight.

Moreover, detailing objectives in quantifiable, objectively verifiable terms, also aids evaluations and helps project initiators chart progress.

9. Trial teaching with a sex-integrated instructional corps.

After the initial revision, it is important to trial teach the materials before widescale distribution or introduction of new materials. Trial teaching can enhance or undercut all previous efforts. If the teachers do not understand or approve of the new materials, they will be reluctant to teach them and may not do so, unless under constant supervision.

Sensitized teachers, particularly women, can be very supportive and instrumental in actually getting the revised curriculum into the classroom. Moreover, since teachers invariably serve as role models, the presence of female teachers discussing and teaching with female examples, is instructionally re-inforc-

ing, as students view a living example of the concept being taught.

10. Outside evaluations, with a sex-integrated evaluation team.

After the first phase of curriculum revision has been completed and trial tested, the first evaluation should be executed. The value of several perspectives on the evaluation team will benefit the revision effort in initial school entry and later if broader curriculum revisions and new curricular developments are determined to be necessary.